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Supplementing Milo-Soy Layer Diets with Selenium

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Four graded levels of selenium up to 1 ppm were added to milo-soy diets and fed to laying hens during a 6-month period. The basal diet contained 15.2% protein, 3056 Calories of metabolizable energy per kg and 0.4 ppm selenium on a calculated basis. Each treatment was replicated four times with 12 hens in 16 inch cages for a total of 48 hens per treatment.

The responses to these treatments are shown in Table 1. Adding 1 ppm Se to the basal diet significantly lowered egg production. All of the hens receiving supplemental Se ate less feed per day than those fed the basal control diet. The best feed conversion was obtained with the addition of 0.50 and 0.75 ppm Se, 1 ppm was perhaps too much and 0.25 ppm and none appeared to be inadequate. The largest egg size was associated with Se supplementation at 0.25, 0.50 and 0.75 ppm. The highest mortality was observed with diets supplemented with 1.00 and 0.75 ppm. Reduced mortality was associated with 0.50 ppm supplementation or less.

In general, these results confirm previous studies and indicate that the efficiency of a milo-soy laying diet when fed to laying hens would probably be improved by supplementation with 0.50 to 0.75 ppm selenium.

Table 1. Responses of Laying Hens on a Milo-Soy Diet
to Supplementation of Selenium

Treatment added Se	Hen-day production	Daily feed intake	Feed per dozen eggs	Egg size	Hen housed mortality
ppm	%	gm	kg	gm	%
1.00	72.7b ¹	110.6b ¹	1.78b ¹	61.1c ¹	13.2b ¹
0.75	75.6a	109.8b	1.72ab	62.1a	12.8b
0.50	77.8a	110.2b	1.65a	61.9ab	5.2a
0.25	75.2a	111.1b	1.73b	62.2a	7.3a
None	76.8a	115.8a	1.77b	61.6b	8.5a

¹Unlike subscripts indicate statistically different values at the 5% probability level.

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